

## PUBLIC WATER FORUM MINUTES

### SERIES 4

February 18, 2010

The City Council of the City of Norman, Cleveland County, State of Oklahoma, attended a Public Water Forum at 6:00 p.m. in the Municipal Building Council Chambers on the 18th day of February, 2010, and notice of the forum was posted at the Municipal Building at 201 West Gray 48 hours prior to the beginning of the meeting. The City of Norman is hosting a Public Forum Series on sustainable water resources for our future to explore long term solutions for Norman's drinking water needs. The public forums are open to everyone with an interest in water and Norman's future. Although this forum is not a regularly scheduled meeting of Council a quorum of Council was present; therefore, a summary of the forum is recorded as required by the Open Meeting Act.

#### PRESENT:

Councilmembers Atkins, Dillingham, Ezzell,  
Kovach, Quinn, Mayor Pro Tem Cubberley

#### ABSENT:

Councilmembers Butler, Griffith and Mayor  
Rosenthal

#### LAKE THUNDERBIRD AUGMENTATION STUDY/CENTRAL OKLAHOMA MASTER CONSERVANCY DISTRICT.

Mr. Randy Wooten, Executive Director of the Central Oklahoma Master Conservancy District (COMCD), provided background information on the development of COMCD and the construction of Lake Thunderbird in 1964. The process began in 1949 with a Reconnaissance Study conducted by the Bureau of Reclamation. In 1953 the Central Oklahoma Water Users Association was created with the Cities of Norman, Midwest City, and Del City. The feasibility report was presented to Congress in 1954 and in 1959, the COMCD was created by a decree of the Cleveland County District Court. Congress authorized the Norman Project in 1960 and construction began in 1962. Construction was completed in 1965 and COMCD took over the maintenance of the lake in 1966.

The water allocation is split between the three cities with Norman being 43.8%, Midwest City at 40.4%, and Del City at 15.8%.

#### Items submitted for the record

1. PowerPoint presentation entitled, "Norman Project History" presented by Randy Wooten, Executive Director, COMCD

Mr. Baxter Vieux, Ph.D., P.E., Vieux, Inc., presented information on the Lake Thunderbird Watershed Study. He said the study evaluated the effect of projected land use change on the water quality in the watershed and identified management practices to improve water quality in the lake. He discussed the effects of water runoff to Lake Thunderbird and the nutrient loading to the lake, which he said is increased by urban development. The following lake water quality concerns were discussed:

- Accelerated eutrophication and annual nutrient load has become a concern for this designated sensitive water supply lake.
- Lake Thunderbird was found to be eutrophic with periods of hyper-eutrophic growth. Total phosphorus was the single most important variable in predicting chlorophyll-a.
- Each year, an average of 20 tons of phosphorus is transported to the Lake from non-point sources in the watershed (yards, etc.)

#### Items submitted for the record

1. PowerPoint presentation entitled, "Lake Thunderbird Water Quality" dated February 18, 2010, presented by Baxter E. Vieux, Ph.D., P.E., Vieux, Inc.

Mr. Matt Warren, U.S. Department of the Interior, Bureau of Reclamation (BOR), provided background information on the BOR including the part they play in the operation of Lake Thunderbird. He said the BOR completed construction of the dam at Lake Thunderbird in 1955 and the U.S. Department of Interior owns the Norman Project, which consists of the Norman dam; pumping plants and pipelines; 6,080 acre reservoir (Lake Thunderbird); and 7,035 acres of surrounding project land. COMCD is responsible for operation of the dam and reservoir and provides water to Norman, Midwest City, and Del City using two pumping plants and 30 miles of pipeline. The Oklahoma Water Resources Board issued a surface water permit to the District based on the original yield calculation for Lake Thunderbird, which is 21,600 acre feet per year (7 billion gallons per year).

As the City of Norman has grown, it has become increasingly dependent on groundwater as a primary water source rather than a supplemental water supply for the reservoir. An alternative to the City's supplemental groundwater supply will be needed to offset reduced water deliveries from the reservoir when storage is less than 31,000 acre feet. The District is currently evaluating alternate supplemental water supplies.

Items submitted for the record

1. PowerPoint presentation entitled, "Reclamation, Managing Water in the West, Lake Thunderbird Water Supply Norman Project, Oklahoma" dated February 2010, presented by Matt Warren, U.S. Department of Interior, Bureau of Reclamation

Mr. Srin Sundaramoorthy, P.E., Project Manager, Tetra Tech, highlighted the Lake Thunderbird Critical Need Water Supply Project. He said a major drought occurred in 2005-2006 and Lake Thunderbird experienced the lowest lake levels in more than 30 years. Future droughts with similar severity would prevent utilizing the full 21,600 acre feet allocated yield from the lake. Augmentation is needed to maintain the original yield during critical drought periods. The COMCD, BOR, and member cities of the District examined a number of alternative methods for additional sources of water. The COMCD and BOR determined that augmentation from the existing Atoka Pipeline would be the best method to meet the objectives of this project.

The proposed project would withdraw raw water from the Atoka Pipeline during critical drought period only. Water withdrawn from the pipeline would be discharged to Lake Thunderbird for storage and distribution to member cities using existing pump station and conveyance pipelines. The three alternatives considered are as follows:

- Constructing a buried pipeline connection from the Atoka Pipeline in the vicinity of the existing blow-off valve near Franklin Road, to a discharge point in the existing Willow Branch Creek.
- Constructing a buried pipeline along the right-of-way of Franklin Road, from the same point of connection to the Atoka Pipeline as Alternative 1, to a discharge point in Lake Thunderbird.
- Constructing a buried pipeline connection from the Atoka Pipeline west of the intersection of Bethel Road and 144th Avenue N.E., to a discharge point in Lake Thunderbird.

Mr. Sundaramoorthy said an environmental assessment is required to evaluate the potential environmental impacts of the proposed project and will help determine if there are significant impacts. He said the draft environmental assessment is in its final stages and based on the work completed to date, it appears as if the outcome will result in a "finding of no significant impact".

Items submitted for the record

1. PowerPoint presentation entitled, "Lake Thunderbird Critical Need Water Supply Project" dated February 18, 2010, presented by Srin Sundaramoorthy, P.E., Tetra Tech

COMPILATION OF QUESTIONS RECEIVED DURING THE FORUM.	
Those not answered during the session will be addressed at a subsequent session prior to completion of the forum series.	
1.	<i>Is the discussion just about maintaining quantity the City needs for extreme drought and not adding water for future growth?</i>
2.	<i>If Texas were to get water from Lake Atoka how would that impact this project?</i>
3.	<i>How much volume is lost from Lake Thunderbird due to sedimentation and will the lake need to be dredged any time soon?</i>
4.	<i>What can Norman do to help slow down the amount of fertilizer that flows into the lake?</i>
5.	<i>What percentage of Norman's water comes from Lake Thunderbird?</i>
6.	<i>To what extent does Lake Thunderbird recharge the Garber Wellington aquifer?</i>
7.	<i>Has the City of Oklahoma City performed the needed modeling to determine how a severe drought will affect the water coming from Lake Atoka?</i>
8.	<i>If the Oklahoma City uses the total allocation, will there be water available to put into Lake Thunderbird?</i>
9.	<i>How does the Ph compare between Lake Thunderbird and Lake Atoka?</i>
10.	<i>If Lake Atoka water is used, what percentage would be lost to evaporation?</i>
11.	<i>What relationship does the City of Oklahoma City have with the North Canadian River? How much water does Oklahoma City remove from the North Canadian?</i>
12.	<i>What is the significance of Lake Thunderbird being on the 303D list?</i>
13.	<i>How will implementation of the Storm Water Master Plan impact the water quality in Lake Thunderbird?</i>
14.	<i>Have there been any results with the efforts with legislators for the potential reuse of effluent for purposes other than irrigation?</i>
15.	<i>Would raising the level of the lake provide for a larger reservoir? What about the possibility of constructing a reservoir below the dam to catch the water released from the flood pool?</i>
16.	<i>What is Norman doing to persuade the State Legislature to change current laws relative to reuse?</i>
17.	<i>A comment was made that Norman could address the development speed to address run-off, which should include cooperation with other cities.</i>
18.	<i>What part of the Lake Thunderbird watershed is outside Norman city limits?</i>
19.	<i>Comments were made relative to the impacts of targeted management practices such as wetlands.</i>
20.	<i>What percentage of the aquifer is owned by the Absentee Shawnee and Pottawatomie Nations?</i>
21.	<i>If Norman utilizes the Atoka Pipeline option, what is the cost per thousand?</i>
22.	<i>How is water treated for mercury contamination?</i>
23.	<i>How would augmentation of Norman's water from Lake Atoka be funded?</i>

The meeting adjourned at 8:08 p.m.

ATTEST:

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City Clerk

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Mayor